

U.S. Serial No. 10/820,373

Docket No. 4819-4701

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) Testing method for designing a semiautogenous or an autogenous grinding circuit with at least one ball mill for grinding ore, the method comprising testing the ore by grinding the ore in two sequential testing steps using a single sample of ore, wherein the first testing step is a semiautogenous testing step for calculating the required grinding energy, and further wherein the second testing step is performed on ore from the first step.
2. (canceled)
3. (previously presented) Testing method according to claim 1 wherein the second testing step is a Bond ball mill test to determine the ball mill energy for a predetermined particle size.
4. (previously presented) Testing method according to claim 2 wherein the semiautogenous testing step is carried out in a ball mill having a diameter to length ratio between 1:0.33 and 1:2.
5. (previously presented) Testing method according to claim 1 wherein the sample of ore to be tested is between 2 and 10 kg in weight.
6. (previously presented) Testing method of the claim 5, wherein the sample of ore to be tested is between 6 and 9 kg in weight.

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7. (previously presented) A testing method for designing a semiautogenous or an autogenous grinding circuit having at least one ball mill for grinding ore, the method comprising:

measuring an amount of time for grinding a predetermined mass of ore to a first predetermined size, in a first, semiautogenous step;

calculating a required grinding energy based on the measured time for grinding in the first step, mass of ore, mill characteristics and a measured specific gravity;

grinding in a ball mill, in a second step, the ore from the first step to a second predetermined size; and

calculating, using the Bond Mill Work Index, a required ball mill energy for the second step required to obtain a desired final grind size.